SECTION 2: TEAM PROCESS

Overview of the AMOC Team's Approach:

The diverse organizational background of the AMOC team provided a wide spectrum of views and challenges. These differences were helpful in determining the type of approach needed in order to succeed in completion of the tasks.

During the kick off meeting, the team agreed that a clear and common understanding of the problems associated with the AMOC approval processes was needed prior to any attempt to resolve the problems. In the same meeting the team reviewed the charter and discussed all the assigned tasks. This assisted the team in reaching agreement on the use of the following approach;

1) COMMON UNDERSTANDING OF THE CHARTER AND THE AMOC PROCEDURE

   Data to support the charter
   Processes within organizations
   Evaluation of the steps within and their purpose
   Legal aspects
   Specific attention to Aircraft on the Ground potential

2) IDENTIFICATION OF BARRIERS TO TIMELY ISSUANCE OF AMOC APPROVALS

   Sources and reasons of delays
   Classification of AMOCs
   Pareto analysis "The Biggest Bang for the Buck"

3) IDENTIFICATION OF NEEDS FOR AND BARRIERS TO DELEGATION

   Legal aspects and enforceability
   Safety objectives
   Delegation to manufacturers
   Delegation to operators
   Delegation to Foreign Regulatory Authorities (Foreign products)

4) IDENTIFICATION OF QUALITIES AND CHARACTERISTICS OF POTENTIAL FUTURE PROCESSES

Target responses
Substantive requirements

5) IDENTIFICATION OF STEPS TO OVERCOME BARRIERS

Legal
Safety objectives

6) DEFINITION OF THE "NEW PROCESS" AND IMPLEMENTATION PLAN

Training (FAA, Industry)
Process Standardization
Performance measure

The above approach charted the team's course of action. As the team progressed toward a series of recommendations some of the steps were found to be redundant or unnecessary. Nevertheless, the team believes that the outlined approach provided a comprehensive road map toward the fulfillment of the assigned charter. During meetings this approach was re-visited to maintain the team's focus on the key issues.

Data Collection and Analysis:

A comprehensive study was conducted in order to develop an understanding by the team regarding the depth and range of the problems associated with AMOCs in general and the AMOC processes in particular. In order to determine whether the problems discussed were real or perceived, the team queried the ATA member airlines to describe their specific problems with the AMOC process. AMOC data from the ACO's was compiled and compared to the operator findings to give the team a perspective of the problems, from both the FAA and industry viewpoint.

A list of questions was provided to ATA member airlines and was designed to give the airlines the opportunity to raise all problems associated with the AMOC issues. The list of questions was:

1) How many AMOC have you requested in the past year?
2) How many were approved/rejected?
3) Do you have any specific problems with the AMOC process that can be cited by specific AD number?
4) What were general subject matters of your request?
    a) Error in service bulletin procedures
    b) Increase in inspection or time interval
    c) Request alternate inspection procedures
    d) Alternate test procedures
5) What improvements would you suggest?

The responses from 10 airlines are presented in Table 1. Northwest Airlines, AMOC team member, provided the same type of data except that the data reflected a three year time span and provided an average elapsed time for approval of various types of AMOC requests. The NWA data is presented in Figures 1 and 2. Later, this proved to be significant in the analysis of the data.

During the same time frame, the FAA ACO members also researched AMOC approval files within their respective offices and determined the total number of AMOC requests and their types. Figures 3 through 6 summarize the results of their research.

The total number of AMOCs reviewed and analyzed by the team was approximately 1300. Based on this review the following conclusions were reached;

1) The number of AMOC requests for airframe ADs are substantially higher than any other discipline. As a result the team agreed to focus on airframe AMOC requests.

2) Data indicated that the volume of AMOC requests for approval of deviations to mandated repairs and modifications far exceeds any other reason for AMOC request, followed by AMOC requests for extensions of compliance time and for alternative inspection methods.

3) There are considerable differences in the number of AMOC requests for repairs of Principal Structural Elements (PSE's) covered by the Supplemental Structural Inspection Program (SSIP). Variations in the manufacturers' developed programs and the differences in the language of the ADs have been identified as the reasons for this difference.

4) Data generated by NWA highlights both the number of requests and the elapsed time for approval. The presentation of the data in this fashion is helpful to focus on the problem areas.

After the review of the data and reaching the above conclusions, the team agreed to proceed with the data collection as was done by NWA but concentrate on the following four areas.

1) SSIP related repairs/follow on inspection program
2) Alternate repairs(non SSIP)/modifications
3) Alternate inspection/methods/tests
4) Time extensions.

Additionally, the team agreed to expand the time frame of AMOC survey from one year to 18 months. This was done in an attempt to use consistent time frames and collect more

data. Similar to the first time, both FAA and industry members initiated the research on the number of AMOCs in the four areas listed above and the elapsed time for approval.

In addition, ATA member airlines were requested to provide the following data;

1) Number of AMOC requests during the period of Jan. 1993, through June of 1994 (18 months period)

2) Number of requests within each of the above four categories.

3) Requested response time of requests; actual FAA response time for request.

The results of the investigation by the FAA members are included in Figures 7 through 11. In general, the data were consistent in that the longest approval periods were associated with the extensions and approval of alternate means of inspections. Both these areas require extensive research and coordination with the operators, Type Certificate Holder and the PMI's. Based on the comments received by the operators and data collected by the ATA and the ACO's it is evident that the majority of the operators are satisfied with the AMOC approval time. However, it is clear that there are some sporadic problems in insuring timely responses to AMOC requests, including coverage during off duty hours.

The team spent a considerable amount of time in obtaining input from customers and identifying problem areas. Using the process of data gathering described above, the team agreed that the four categories identified are the ones that if improved will yield the highest benefit to the FAA and its customers.

TABLE 1.

AMOC REQUEST SUMMARY

AIRLINE	REQUESTS	REJECTIONS	ALTERNATE			MAINT PROG INSPECTION ALIGNMENT	TERMINATING AD REPAIRS
			REPAIRS	INSPECT	TESTS		
US AIR	73	4	41	14	-	18	-
CO	61	1	40	9	-	11	-
DELTA	60	1	✓	-	-	-	-
UNITED	47	3	✓	✓	✓	✓	-
UPS	28	1	14	14	-	-	-
AAL	26	2	-	✓	✓	✓	-
TWA	25	2	✓	-	-	-	-
ALOHA	19+/-	-	3	-	-	3	13
ALASKA	8*	-	3	-	-	3	-
EIA	7	-	✓	-	-	-	-
TOTAL	351	14	101+	37+	✓	35+	13+

* 2 AMOC REQUESTS SUBMITTED DUE TO ERRORS IN AD

FIGURE 1.

AMOC Summary by Category

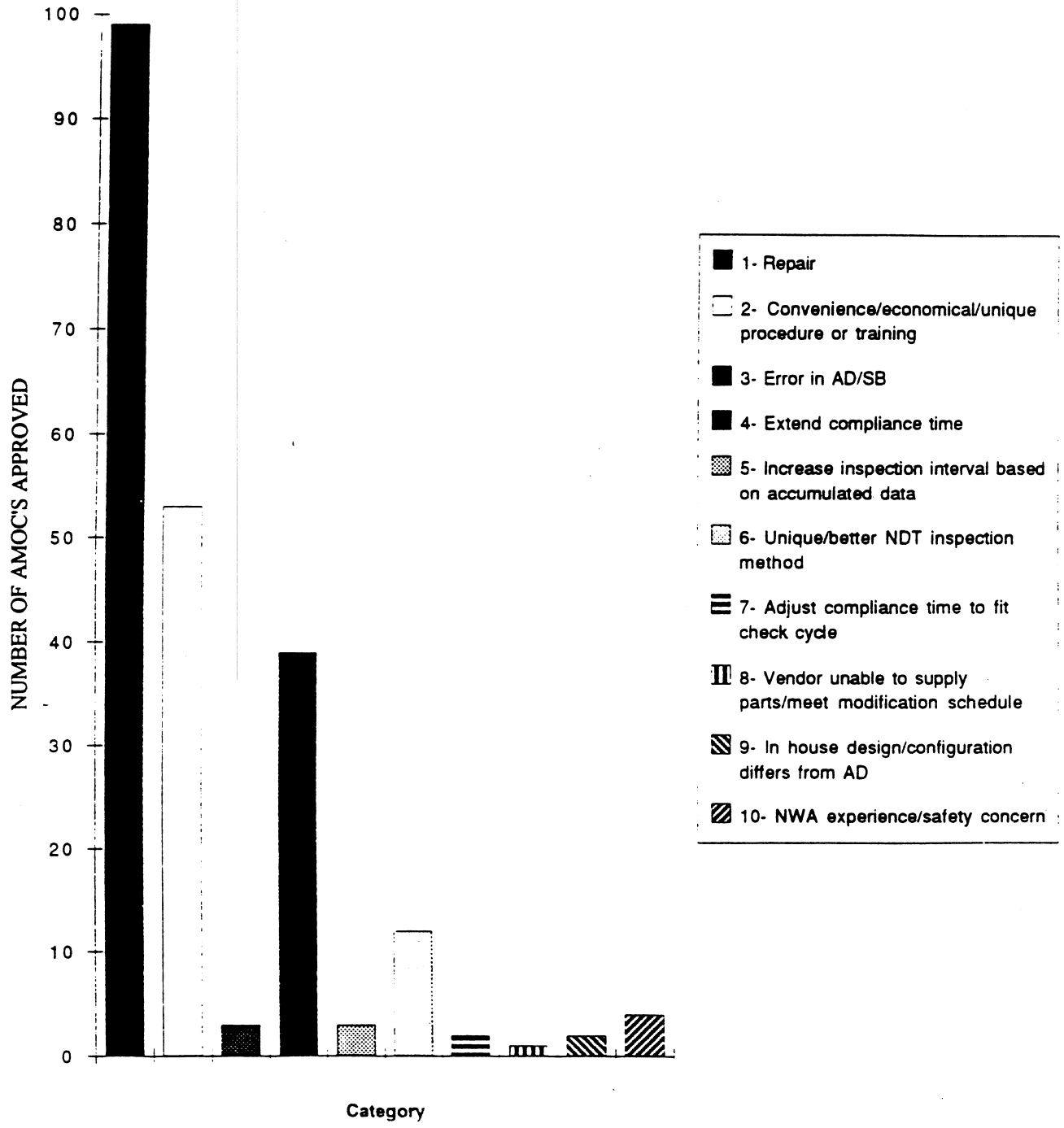


FIGURE 2.

Average AMOC Approval Duration by Category

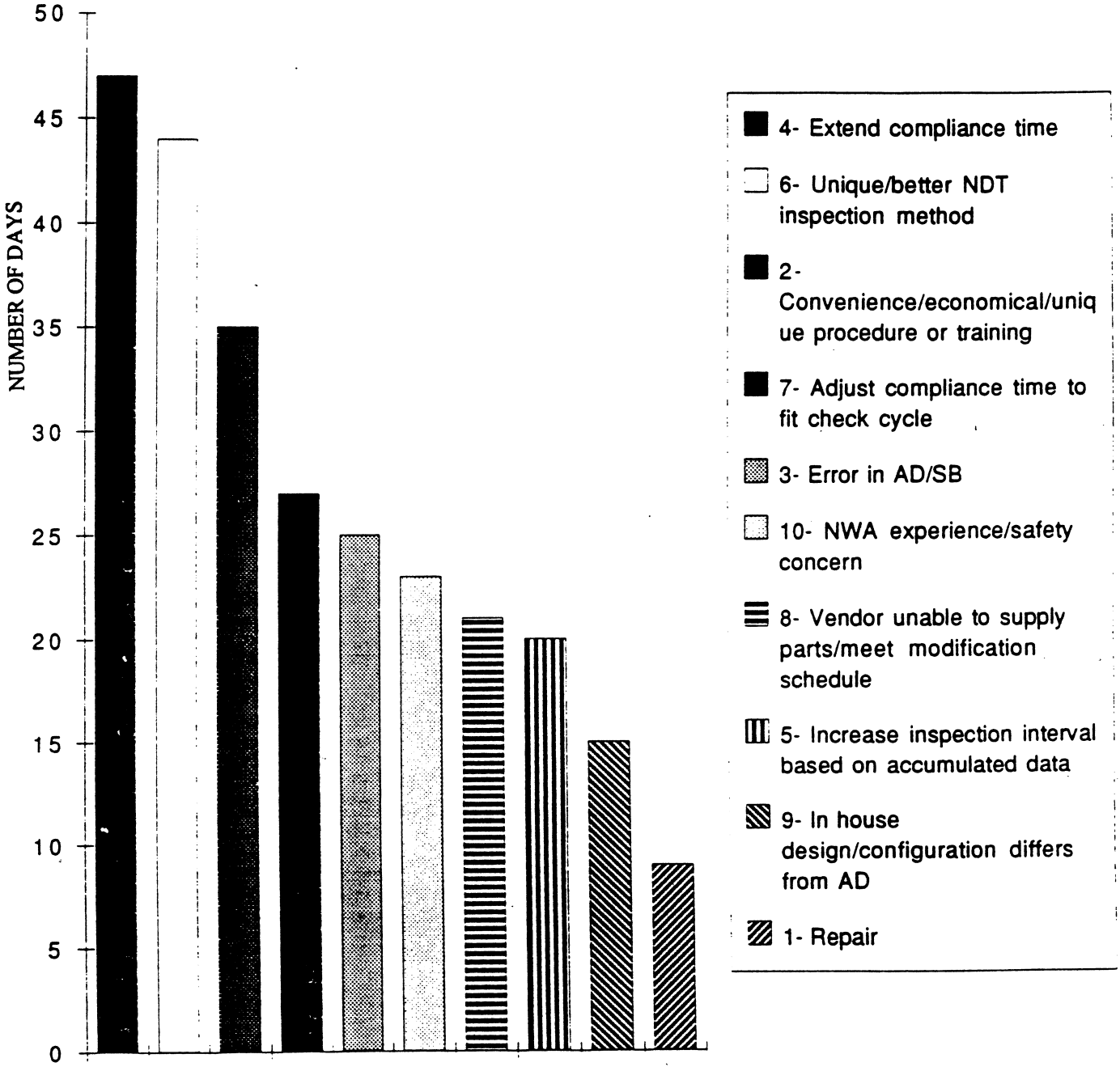


FIGURE 3

1993 Los Angeles Aircraft Certification Office Alternate Means of Compliance Requests by Branch

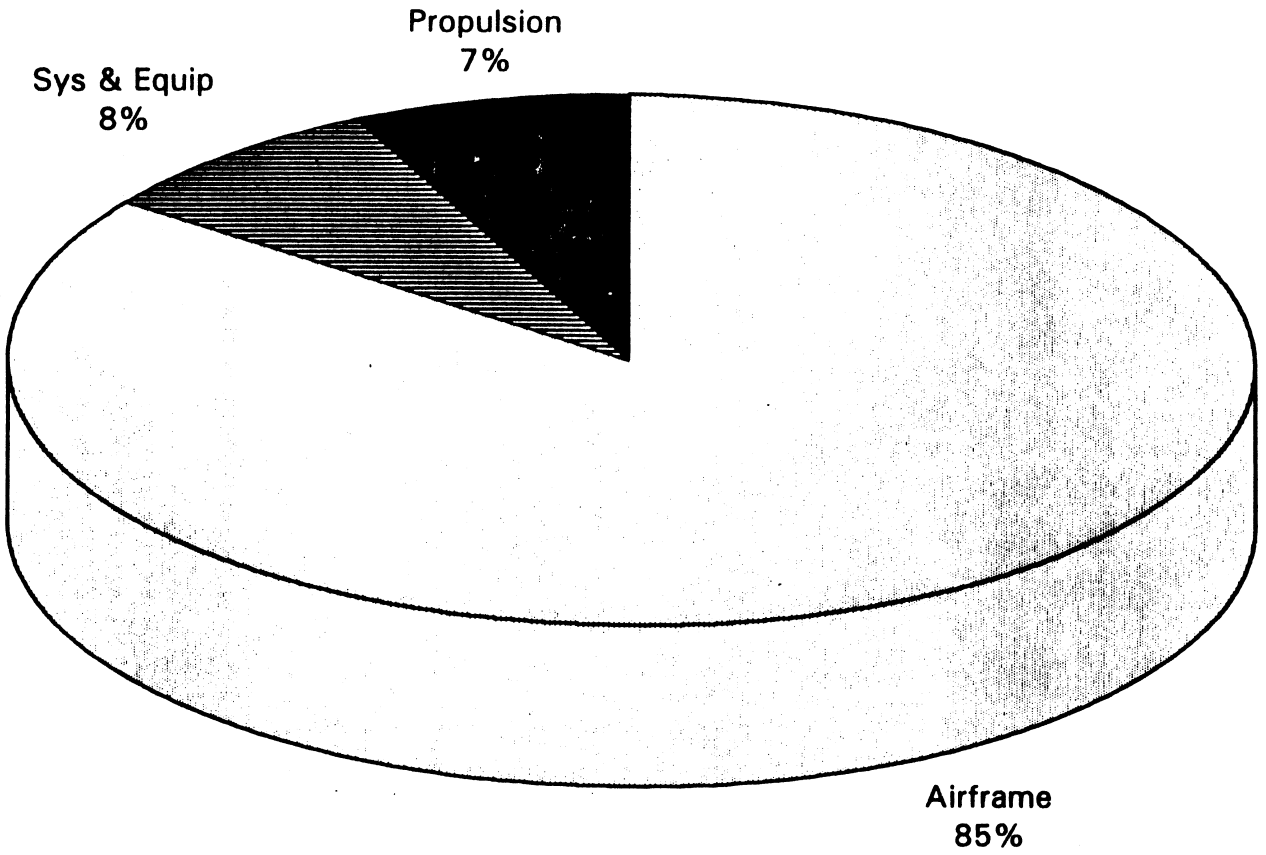


FIGURE 4

1993 Los Angeles Aircraft Certification Office Alternate Means of Compliance Requests by Reason

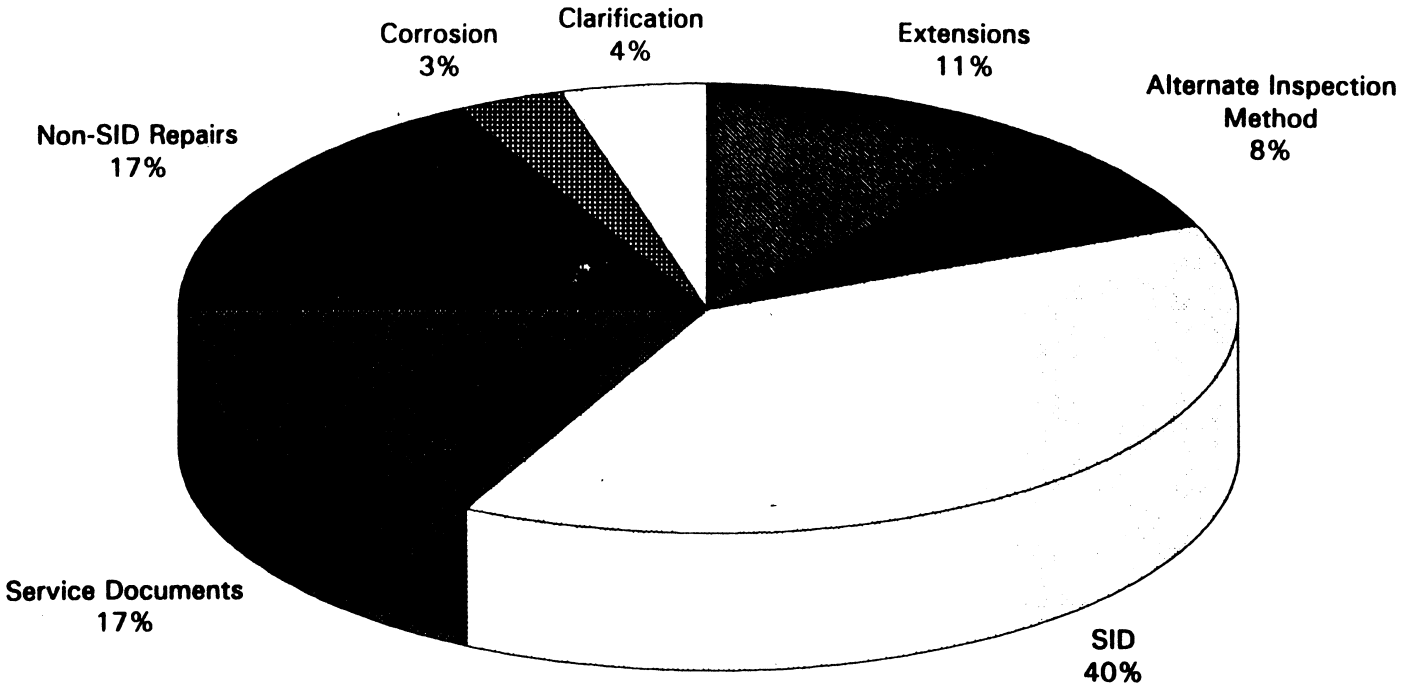


FIGURE 5

1993 Seattle Aircraft Certification Office Alternate Means of Compliance Requests by Branch

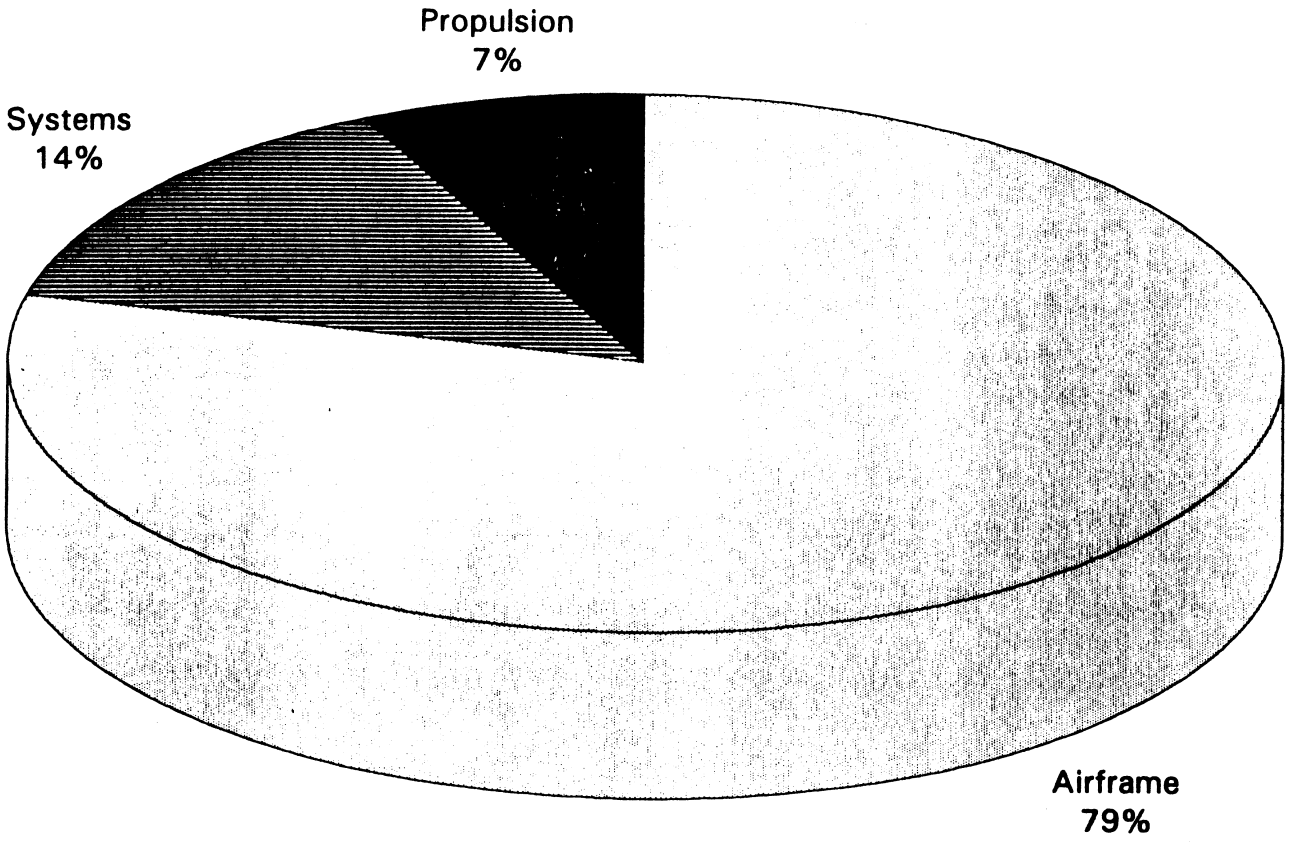


FIGURE 6

1993 Seattle Aircraft Certification Office Requests by Reason

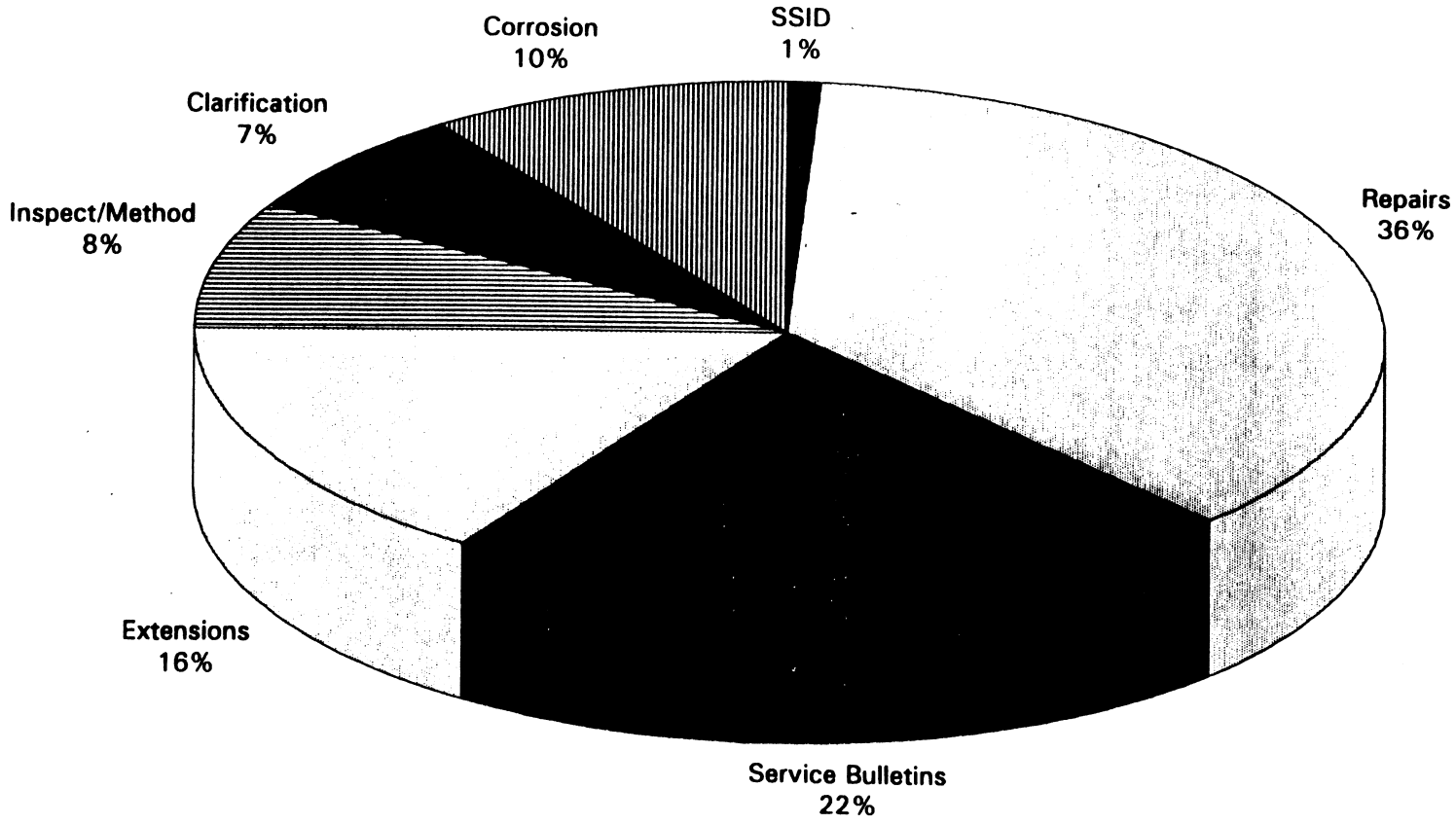


FIGURE 7

Los Angeles Aircraft Certification Office - Airframe Branch Total Number of Alternate Means of Compliance Requests by Category for 1/1/93 thru 6/31/94

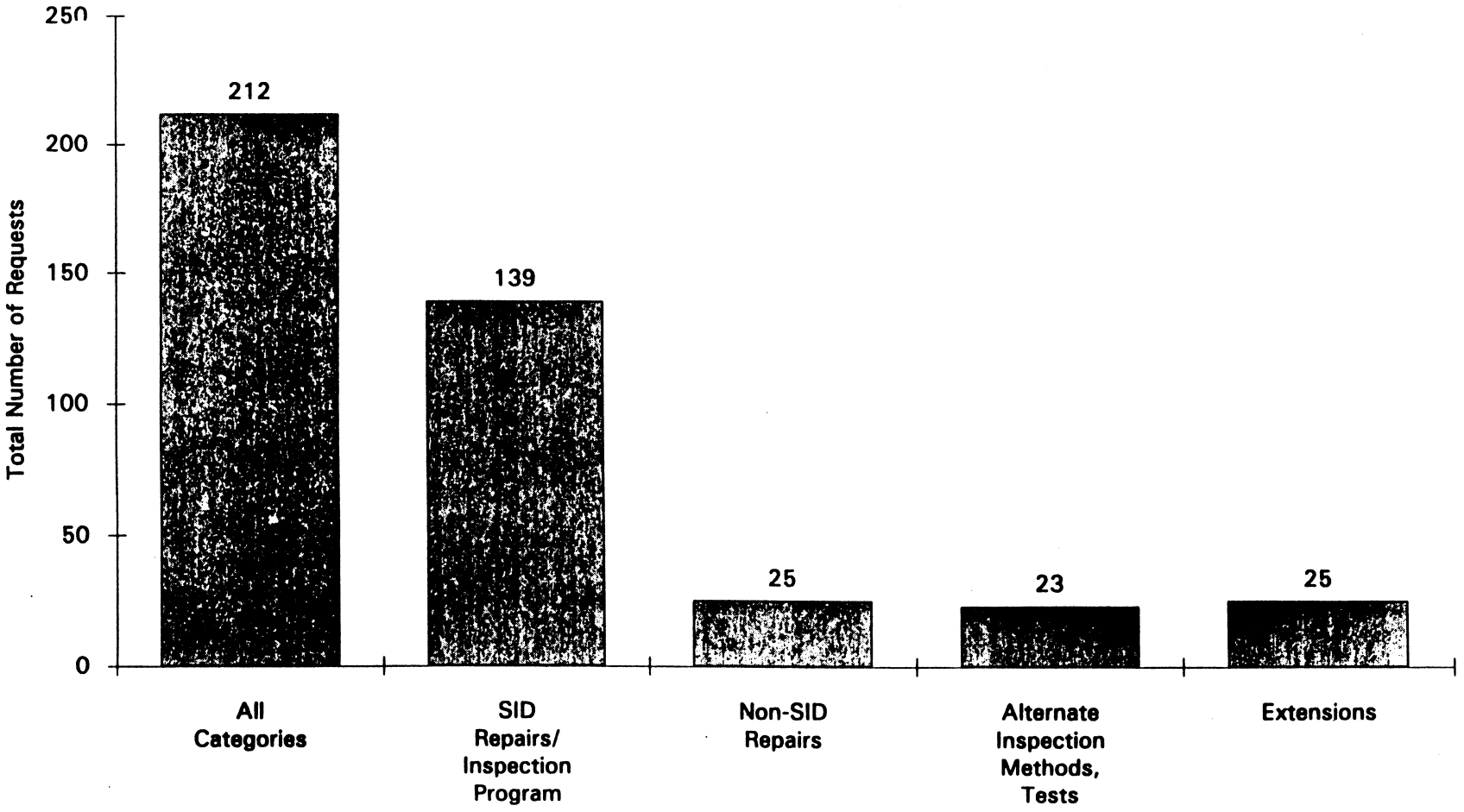


FIGURE 8

Los Angeles Aircraft Certification Office - Airframe Branch Alternate Means of Compliance Average Processing Time for 1/1/93 thru 6/31/94

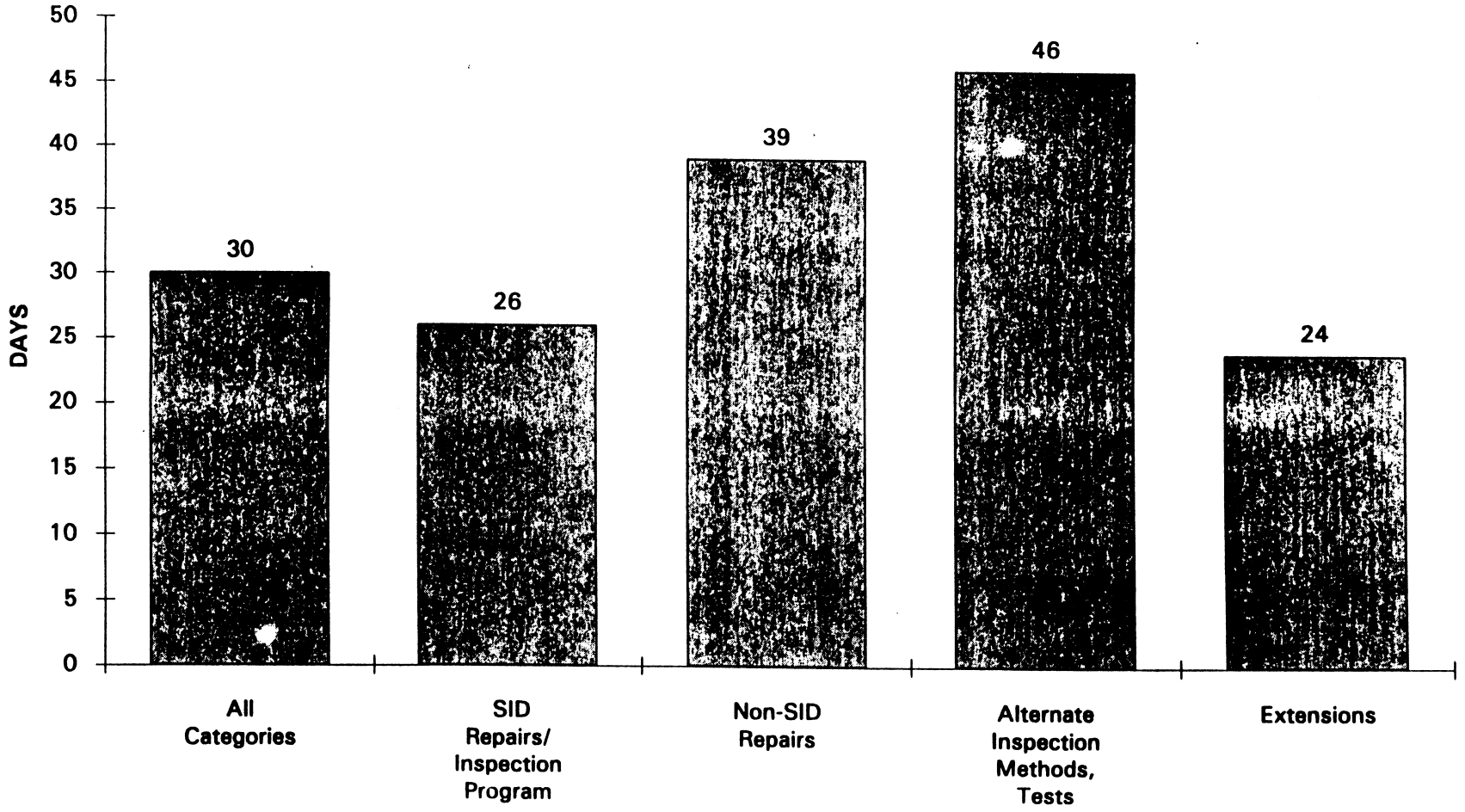
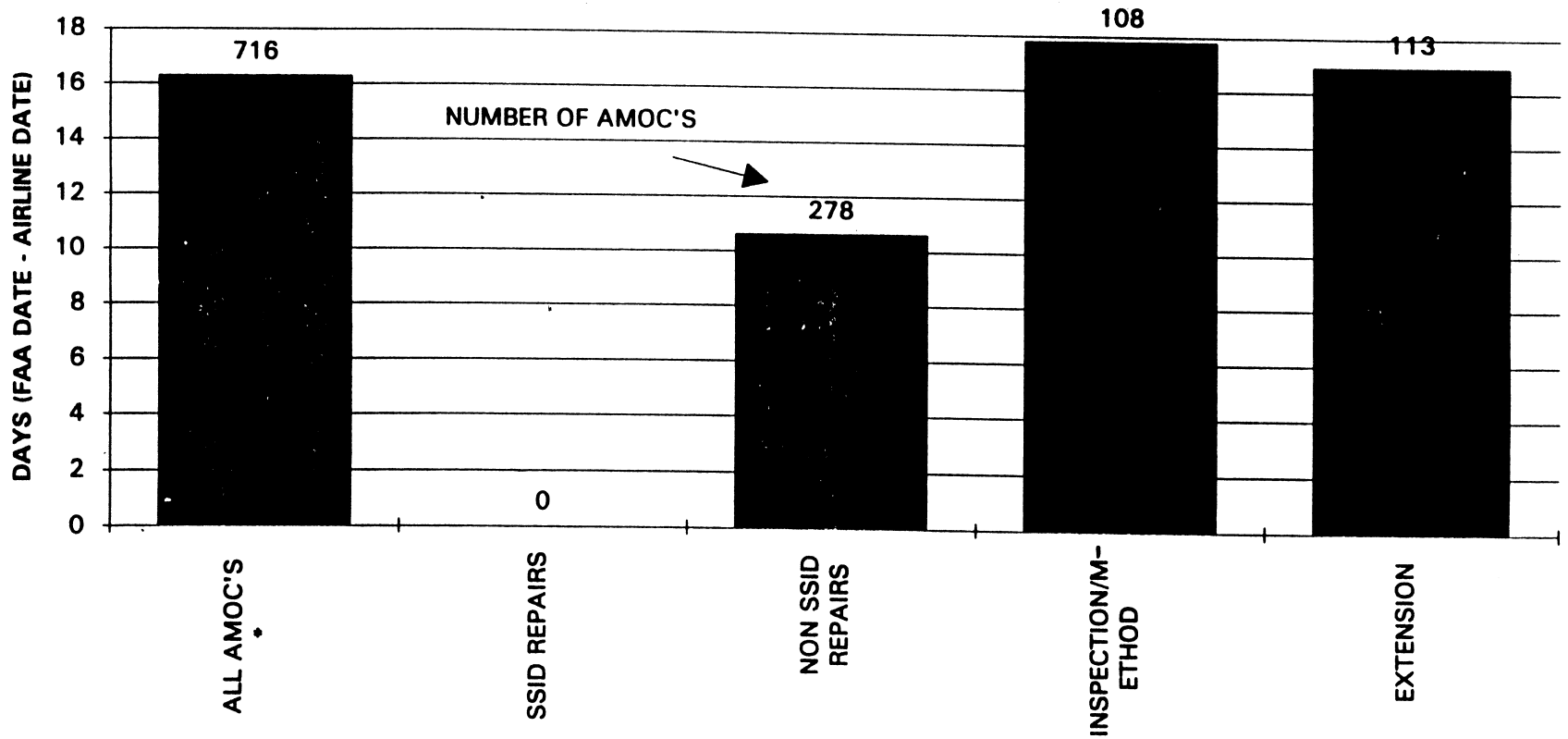


FIGURE 9

Seattle Aircraft Certification Office - Airframe Branch Total Number of Alternate Means of Compliance Requests by Category for 1/1/93 thru 6/31/94



* TOTAL AMOC'S INCLUDING CORROSION, SERVICE BULLETINS, AND CLARIFICATIONS

FIGURE 10

Seattle Aircraft Certification Office - Airframe Branch Alternate Means of Compliance Average Processing Time for 1/1/93 thru 6/31/94

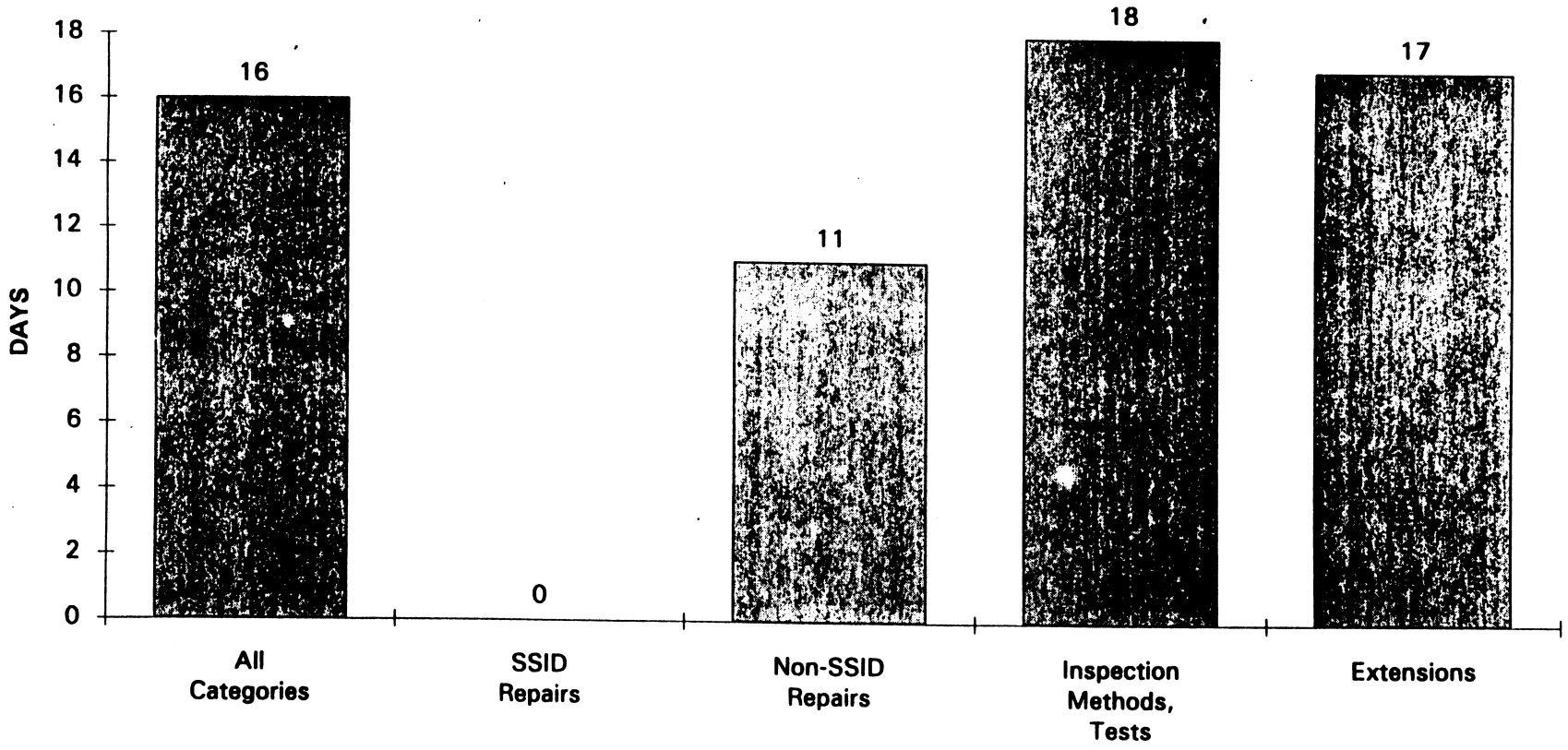


FIGURE 11

Transport Airplane Directorate - Standardization Branch (ANM-113)

AMOC Approvals 1/93 - 6/94